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WHAT IS CLAIMED IS:

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1. A method for making a coated strap comprising the steps of:
providing a metal strap having first and second sides and opposing edges;
conveying the strap along a conveyance path through a coating apparatus;
5 applying a powder on the first side of the strap, the powder being applied to
the first side and the opposing edges of the strap;
applying a powder on the second side of the strap, the powder being applied
to the second side and the opposing edges of the strap;
melting the powder to form a flowable material, the flowable material
10 coating the strap;
curing the flowable material on the strap;
cooling the strap; and
winding the strap onto a storage member.
- 15 2. The method for making a coated strap in accordance with claim 1,
including the step of conveying the strap in a vertical orientation upwardly through
the coating apparatus.
- 20 3. The method for making a coated strap in accordance with claim 2
including the step of supporting the strap from only an uppermost point as it moves
in the vertically upward direction.
- 25 4. The method for making a coated strap in accordance with claim 1
wherein the powder is applied using an electrostatic application process.
5. The method for making a coated strap in accordance with claim 4
including first applying the powder to the first side of the strap and subsequently
applying the powder to the second side of the strap.
- 30 6. The method for making a coated strap in accordance with claim 1

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13. The method for making a coated strap in accordance with claim 2 including directing the strap in the vertically upward orientation a distance of about 30 feet for cooling.

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14. The method for making a coated strap in accordance with claim 13 including redirecting the strap from the vertically upward orientation to a generally downward orientation prior to winding the strap onto the storage member.

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15. The method for making a coated strap in accordance with claim 14 wherein the strap is redirected using at least one crowned pulley.

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16. A corrosion-resistant coated and cured strap comprising:
an elongated metal strap base element, the metal strap base element having a width and a thickness defining first and second sides and a pair of edge regions;
and
a cured powder coating on the base element, the coating having a substantially consistent thickness at the first and second sides and at the edge regions.

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17. The corrosion-resistant coated and cured strap in accordance with claim 16 wherein the coating has a greater thickness at about the edge regions and on the first and second sides adjacent the edge regions defining a dog-bone profile.

18. The corrosion-resistant strap in accordance with claim 16 wherein the coating is a melted and cured powder.

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19. The corrosion-resistant strap in accordance with claim 18 wherein the powder is an epoxy material.

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20. The corrosion-resistant strap in accordance with claim 16 wherein the coating has a thickness of about 0.2 mils to about 5.0 mils.

21. The corrosion-resistant strap in accordance with claim 20 wherein

the coating has a thickness of about 0.6 mils to about 1.2 mils.

~~22. The corrosion-resistant strap in accordance with claim 21 wherein the coating has a thickness of about 0.8 mils.~~

23. The corrosion-resistant strap in accordance with claim 17 wherein the coating has a thickness at about the first and second sides of about 0.2 mils to about 5.0 mils.

24. The corrosion-resistant strap in accordance with claim 23 wherein the coating has a thickness at about the first and second sides of about 0.6 mils to about 1.2 mils.

25. The corrosion-resistant strap in accordance with claim 24 wherein the coating has a thickness at about the first and second sides of about 0.8 mils.

26. A strap base material coating apparatus for applying a powdered coating to the base material and curing the coating on the base material to form a cured strap, the base material having first and second opposing sides and defining edge regions, the coating apparatus disposed in-line in a strap making apparatus, the coating apparatus comprising:

a conveyance path;

a powdered coating spray region for applying a powdered coating to each of the first and second sides and the edge regions of the strap base material;

a heating region, disposed subsequent to the powdered coating spray region, the heating region having a sufficient length for melting of the powdered coating to cover the strapping base material;

a cure region having a predetermined length sufficient for curing of the melted powdered coating; and

30 a cooling region disposed subsequent to the cure region.

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BOOK REVIEW

28. The coating apparatus in accordance with claim 26 wherein the cure region includes an oven.

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35. A method for continuous manufacture of strap comprising the steps of:

providing a source of strap material;

quenching the bare strap;

melting the powder on the coated strap to form a flowable material, the flowable material forming a film on and coating the coated strap;

10 curing the flowable material on the coated strap to form a cured strap;
cooling the cured strap; and
winding the cured strap onto a storage member.

36. The method for continuous manufacture of strap in accordance with
15 claim 35, including providing a coating apparatus, wherein the powder applying
step, the powder melting step, the curing step and the cooling step are carried out in
the coating apparatus.

37. The method for continuous manufacture of strap in accordance with
20 claim 36 including the step of conveying the strap in a vertical orientation upwardly
through the coating apparatus.

38. The method for continuous manufacture of strap in accordance with claim 37 including the step of supporting the strap from only an uppermost point as it moves in the vertically upward direction.

39. The method for continuous manufacture of strap in accordance with claim 35 wherein the powder is applied using an electrostatic application process.

30 40. The method for continuous manufacture of strap in accordance with

claim 39 including first applying the powder to the first side of the strap and subsequently applying the powder to the second side of the strap.

5 41. The method for continuous manufacture of strap in accordance with claim 35 wherein the step of applying the powder on the first side of the strap includes applying the powder on the second side of the strap adjacent the opposing edges and wherein the step of applying the powder on the second side of the strap includes applying the powder on the first side of the strap adjacent the opposing edges.

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42. The method for continuous manufacture of strap in accordance with claim 35 including the step of heating the strap with the powder thereon.

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43. The method for continuous manufacture of strap in accordance with claim 42 including providing an oven for heating the strap.

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44. The method for continuous manufacture of strap in accordance with claim 42 including the step of cooling the strap in a quench bath prior to applying the powder to the strap.

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45. The method for continuous manufacture of strap in accordance with claim 44 wherein the cooling step reduces the temperature of the strap to less than about 130°F.

46. The method for continuous manufacture of strap in accordance with claim 35 including establishing a latent heat in the bare strap, and using the latent heat of the bare strap to melt the powder to form the flowable material.

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47. The method for continuous manufacture of strap in accordance with claim 37 including directing the strap in the vertically upward orientation a distance

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of about 30 feet through the coating apparatus for cooling.

48. The method for continuous manufacture of strap in accordance with claim 47 including redirecting the strap from the vertically upward orientation to a
5 generally downward orientation prior to winding the cured strap onto the storage member.

49. The method for continuous manufacture of strap in accordance with claim 48 wherein the strap is redirected using at least one crowned pulley.
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